

## HIV and Pregnancy - Is Vaginal Delivery a Safe and Viable Option?

HIV in children is predominantly acquired vertically. Without intervention, mother to child transmission (MTCT) has varied from 20%-40%(1). Vertical transmission of HIV can occur *in utero* through placental transmission, intrapartum through contact with infected birth canal secretions or postpartum through breast feeding. It is estimated that of the 30% of babies who get infected vertically, 2% get infected in early gestation, 3% get infected in late gestation, 15% get infected intrapartum and 10% get infected via breast feeding(2). HIV transmission from infected mother to child is mainly prevented by antiretroviral drug (ARV) prophylaxis to mother and baby, replacement feeding and elective cesarean section. ARV prophylaxis acts by reducing viral load in the mother and as post-exposure prophylaxis to the baby. Cesarean section decreases risk of intrapartum transmission of HIV by decreasing transplacental hemorrhage during labour and reducing the length of exposure of baby to vaginocervical secretions. Cesarean section decreases transmission by approximately 50 percent as compared to other modes of delivery(3). MTCT rates of less than 2% have been reported from countries where ARV prophylaxis, cesarean section and avoidance of breast feeding is practiced. However, in a setting where ARV prophylaxis as well as replacement feeding is provided, is there really a necessity of elective cesarean section delivery?

Elective cesarean section is associated with post partum morbidity in form of fever, urinary tract infection, endometritis and thromboembolism(3). An Italian registry for HIV infection in children found that MTCT rate was 15.5% in 1985-1995 period and 5.8% in 1996-1999 period. They found only elective cesarean section was associated with lower risk of mother-to-infant transmission before 1995. After 1995, non-breast feeding and receipt of

ART were protective whereas elective cesarean section was not significantly protective(4). Similarly, a study by the author in Mumbai in 222 mother-child pair found that vaginal delivery was as effective as cesarean section for prevention of MTCT of HIV when combined with ARV prophylaxis and no breast feeding(5).

Thus, when ARV prophylaxis to mother and child are available and replacement feeding can be issued, the added advantage of cesarean section is not seen and vaginal delivery may be a safe and inexpensive option in this setting. However, in areas where safe replacement feeding may not be available, elective cesarean section may decrease rate of transmission of HIV initially but breast feeding may substantially increase the overall transmission rate nullifying the advantage of cesarean section.

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## REFERENCES

1. Antiretroviral drugs for treating pregnant women and preventing HIV infection in infants in resource-limited settings: towards universal access. Recommendations for public health approach 2006. Available at URL <http://www.who.int/hiv/pub/guidelines/pmtct/en/index.html>. Accessed on 22 August 2006.
2. Rouzioux C, Costagliola D, Burgard M, Blancke S, Mayaux MJ, Griscelli C, *et al*. Estimated timing of mother-to-child human immunodeficiency virus type 1 (HIV-1) transmission by use of a Markov Model. *Am J Epidemiol* 1995; 142: 1330-1337.
3. Read JS, Newell MK. Efficacy and safety of caesarean delivery for prevention of mother-to-child transmission of HIV-1. *Cochrane Database Syst Rev* 2005; 4: CD 005479.
4. Italian Register for Human Immunodeficiency Virus Infection in Children. Determinants of

mother-to-infant human immunodeficiency virus 1 transmission before and after the introduction of Zidovudine prophylaxis. *Arch Pediatr Adolesc Med* 2002; 156: 915-921.

5. Shah I. Is elective caesarean section really essential for prevention of mother to child transmission of HIV in the era of antiretroviral therapy and abstinence of breast feeding? *J Trop Pediatr* 2006; 52: 163-165.

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## The Impact of "Impact Factor" on Medical Journalism in the Developing World!

When I was looking for a journal to publish my MD thesis paper(1), I had only one criterion in mind: the journal should be indexed in the Medline, so that others can easily find and read it. I had not even heard about Impact Factor (IF) at that time. These days however, authors and scientific institutions have an obsession for IF, and this overshadows the quality of the papers to some extent. Papers published in a high IF journal may be valued more just because of the name and prestige of the journal!

Many developing countries have scales tuned to IFs for granting financial rewards to papers published in international journals(2). Sometimes, the reward for publishing a non-peer-reviewed letter in a high IF journal is more than a peer-reviewed original article published in a low IF journal. Needless to say, un-indexed local journals receive little attention. In the mean time, some science journals with a low IF artfully try to boost their ranking which makes IF even more questionable(3).

Cash rewards may cause a rapid increase in the number of international publications, but do not guarantee the quality of scientific work. Good papers published in local journals not indexed by ISI are simply ignored. This shifts submissions towards well established international journals, undermines scientific journalism in the developing countries and widens the gap between the high and low IF journals.

The nature of most of the research done in the developing world is different from the developed

world. The developing world needs to do more epidemiological and health system research to meet its own domestic needs. The West is not that interested in diseases of poverty. This kind of research does not often get published in the high IF journals and if published in local journals, will not be cited or even viewed very often! I believe the best policy to support scientific journalism in the developing world is just to forget about the luxury of IF and to give the local journals a chance to thrive.

IF should not be used as the only criterion to evaluate the caliber of a journal, nor should it be used to evaluate an individual scientific paper. This will create a systematic bias as far as how scientific publications especially from the developing world, are evaluated. This is not at all healthy for scientific research, particularly in the developing world.

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## REFERENCES

1. Mohammadi M, Mohebbi MR, Naderi F. CSF glucose concentrations in infants with febrile convulsions and the possible effect of acetaminophen. *Indian Pediatr* 2003; 40: 1183-1186.
2. Fuyuno I, Cyranoski D. Cash for papers: putting a premium on publication. *Nature* 2006; 441: 792.
3. Begley S. Science journals artfully try to boost their ranking. *Wall Street Journal*, June 2006. Available online at: [http://online.wsj.com/public/article/SB114946859930671119-B\\_FW\\_Satwxeah211oJ7Dmcp4Rk\\_20070604.html?mod=rss\\_free](http://online.wsj.com/public/article/SB114946859930671119-B_FW_Satwxeah211oJ7Dmcp4Rk_20070604.html?mod=rss_free). Accessed Nov 2007.